

Defense Information Infrastructure (DII)

Common Operating Environment (COE)

Version 3.0

**Consolidated Installation Guide
for Windows NT 3.5.1**

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Prepared for:

Defense Information Systems Agency

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Forward

Installation Instructions available for the Defense Information Infrastructure (DII) Common Operating Environment (COE) Commercial-Off-The-Shelf (COTS) products do not appear in this release of the DII COE Consolidated Installation Guide. Contact the Defense Information Systems Agency (DISA) for information concerning the licensed software and supporting documentation.

NOTE: Contact DISA's Configuration Management for the available documentation on the DII COE COTS applications.

The DII COE Consolidated Installation Guide is part of a set of DII COE developer documentation published in conjunction with major or general releases of the DII COE (such as DII COE Version 3.0). It contains the latest information available on the date of release of this publication.

Segment Availability: Not all DII COE segments described in this document may be available in the referenced release of the DII COE. The information contained herein may precede the availability of certain DII COE software segments. Please visit the DISA's DII COE Home Page on the World Wide Web to obtain the most current information available and to obtain the latest available release of DII COE software segments and other related documentation required by your organization.

DISA DII COE Home Page URL: <http://www.disa.mil/dii/diicoe> or
<http://204.34.175.79/dii/>

Segment Documentation Applicability: Software segments included in this document are identified by their DII COE segment release version number and/or product version number, as available. It is important to note, however, that documentation released with a given segment version may be applicable to subsequent version(s) of the same software segment. For example, the installation guide for a DII segment version 3.0.0.3 may also apply to version 3.0.0.4 of the same segment unless superseded by a new release of the documentation. Refer to the details provided in the Version Description Document (VDD) for a particular segment release and its related amendments or errata to obtain the most current information on the fixes incorporated, additional sources of information, or reference documents.

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Part 1. Installation Guide for the Kernel (Windows NT) Version 3.0.0.4

Preface

The following conventions have been used in this document:

[HELVETICA FONT]	Used to indicate keys to be pressed. For example, press [RETURN].
Courier Font	Used to indicate entries to be typed at the keyboard, Windows NT commands, titles of windows and dialog boxes, file and directory names, and screen text. For example, execute the following command: A:\SETUP.EXE
“Quotation Marks”	Used to indicate prompts and messages that appear on the screen.
<i>Italics</i>	Used for emphasis.

1. Introduction

This document provides information and guidance needed for proper installation of the Windows NT Operating System Version 3.51 and the Defense Information Infrastructure (DII) Common Operating Environment (COE) kernel Version 3.0.0.3 for Windows NT.

The Windows NT Setup program prepares Windows NT to run on your computer. The Setup program copies the appropriate files onto your computer's hard disk and then configures the software needed to run applications and to use the network. In addition, the Setup program guides you through the installation steps and provides system Help for any step where you may need assistance.

Before you run the Setup program, you should note the system and media requirements listed in Section 1.1, *System Requirements*, and answer the questions about the installation listed in Section 1.2, *Installation Preparation*.

1.1 System Requirements

This section describes DII COE hardware components and operating system components for the Windows NT Operating System 3.51.

1.1.1 Hardware Components

- C 80486 or higher with at least 16 megabytes (MB) of random access memory (RAM) (12MB minimum is required for Windows NT)
- C 3.5-inch high density floppy drive (required to install the DII COE kernel)
- C 125MB minimum free hard disk space to provide sufficient swap space and room for temporary files.
 - % Windows NT Operating System—75MB
 - % DII COE runtime files—1MB
 - % Swap space and temporary files—40MB (recommended)
 - % DII COE tools—2MB (developers only).
- C 500MB free disk space recommended for segments and data.

1.1.2 Operating System Components

- C Windows NT 3.51 Operating System CD-ROM
- C Windows NT 3.51 Service Pack 3 or later.

1.2 Installation Preparation

The following questions must be answered before you install Windows NT Operating System 3.5.1 and the DII COE kernel. Your system administrator should provide you with the appropriate answers.

1. What kind of display adapter card is installed in your computer?
 - C How much video RAM is installed?
 - C What is your monitor's refresh rate?
 - C What resolution do you plan to use on your display (e.g., 1024 x 768, 800 x 600)?
 - C What color depth do you plan to use on your display (e.g., 256 colors, 65536 colors)?

2. Does the computer have a Network Adapter Card? If so,
 - C What type of network adapter does your computer have?
 - C What is the card's interrupt request number (IRQ)?
 - C What is the base input or output (I/O) address?
3. Will the computer use a network? If so,
 - C What is the name of the computer?
 - C What is the name of the workgroup or the domain that the computer will join?
4. Is there a Dynamic Host Configuration Protocol (DHCP) server?
 - C If so, what is the network address of the DHCP server?
 - C If not, what is your computer's Internet Protocol (IP) address and network mask?
5. Is the computer using Domain Name Service (DNS)? If so,
 - C What is your domain name?
 - C What is the IP address of your DNS server?
6. Is a printer connected directly to the computer? If so,
 - C What is the name of the printer?
 - C What is the printer model?
 - C What port does the printer use?
7. What is the server clock time?

<p>NOTE: The local clock <i>MUST</i> be synchronized to within 5 minutes of the server clock to allow DCE to be configured.</p>
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1.3 Additional Sources of Information

Reference the following documents for more information about the DII COE:

- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification Version 2.0*, DII COE I&RTS:Rev2.0, Inter-National Research Institute, October 23, 1995
- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Programming Guide (Windows NT) FINAL Version 3.0.0.3*, DII.3003.Final.NT.PG-1, Inter-National Research Institute, October 29, 1996
- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) System Administrator's Guide (Windows NT) FINAL Version 3.0.0.4*, DII.3004.Final.NT.AG-1, Inter-National Research Institute, November 1, 1996
- C *Defense Information Infrastructure (DII) Common Operating Environment (COE) Windows NT Service Pack Installation Guide (Windows NT 3.5.1, Service Pack 3) FINAL*, DII.3003.Final.NT351.SP3.IG-1, Inter-National Research Institute, October 29, 1996
- C *Microsoft Windows NT Workstation Installation Guide*, Microsoft Corporation, 1994.

2. Installing the Windows NT Operating System

The Windows NT Operating System is distributed by Microsoft on either floppy diskettes or CD-ROM. Complete instructions for installing the operating system are provided in the *Microsoft Windows NT Workstation Installation Guide*, which should accompany the software.

This section supplements the *Microsoft Windows NT Workstation Installation Guide* to include instructions specific to the DII COE configuration. Even if the Windows NT Operating System is already installed on your computer, you should still review this section to ensure that the operating system is configured properly for the DII COE.

The following are recommendations for installing the Windows NT Operating System for the DII COE:

Express vs. Custom Setup

- C It is recommended that you select the `Express Setup` option unless you have prior experience installing the Windows NT Operating System.

Partitioning the Hard Disk

- C If you choose to create a new partition for Windows NT, it is recommended that you partition the entire drive for the Windows NT Operating System.

- C The DII COE can only be installed on an NT file system (NTFS). If you are creating a new partition for Windows NT, you must format it using NTFS.

General Configuration

- C It is recommended that you install the Windows NT system files in the default directory, \WINNT35.

Networking

- C Windows NT supports multiple network protocols. It is recommended that you enable Transmission Control Protocol/Internet Protocol (TCP/IP) transport as a minimum. You may enable additional protocols, if desired.
- C To avoid confusion, your computer name should be the same as your TCP/IP host name. If you are unsure of your TCP/IP host name, contact your system administrator.

Miscellaneous

- C When creating new accounts, remember that passwords are case sensitive. If you have difficulty entering your password, verify that the [CAPS LOCK] key is turned off.
- C It is recommended that you wait until the entire installation is finished before making changes to the display settings. Use the Display option in the Control Panel to make changes to your video configuration after running the Setup program.
- C It is recommended that you create an emergency repair floppy diskette. This repair floppy diskette must be updated each time you change your system configuration (e.g., network card, video display).

Service Packs

- C Windows NT service packs are released intermittently to correct problems with the Windows NT Operating System. Each service pack contains corrections from all previous service packs.
- C Service Pack 3 or later is required to some software packages, such as the Distributed Computing Environment (DCE). This service pack fixes many serious problems in the Windows NT Operating System and should be installed on all machines.

- Ⓒ No service pack is installed during the normal Windows NT Version 3.51 installation. Service packs are distributed in several formats including CD-ROM and compressed archived files available via the Internet. To install a service pack, run `UPDATE.EXE`. The location of this file may vary by distribution media. The usual location is `\SVCPACK\3.351\I386\UPDATE.EXE` for CD-ROM distributions. Certain service packs may also be available on separate disk sets as part of a DII distribution.

<p>NOTE: Reference the <i>DII COE Windows NT Service Pack Installation Guide</i> (Windows NT 3.5.1, Service Pack 3) for information on installing Service Pack 3.</p>
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3. Installing the DII COE Kernel for Windows NT

The DII COE kernel for Windows NT consists of DII COE runtime files.

The DII COE kernel Installer performs the following actions:

- Ⓒ Loads the DII COE runtime files onto the user's hard drive
- Ⓒ Configures the DII COE for the user's computer.

Follow the steps below to install the DII COE kernel for Windows NT Operating System Version 3.51.

- STEP 1:** **Insert the first installation floppy diskette and run the installation executable file.** Place the first DII COE installation diskette in drive A:. Select the `File` pull-down menu from the Program Manager. Select `Run`, type `A:\SETUP.EXE` in the command line dialog box, and press `[RETURN]` or click on the `OK` button. The DII logo appears, then the `Welcome` window appears, as shown in Figure 1. Click on the `Next` button to continue the installation.

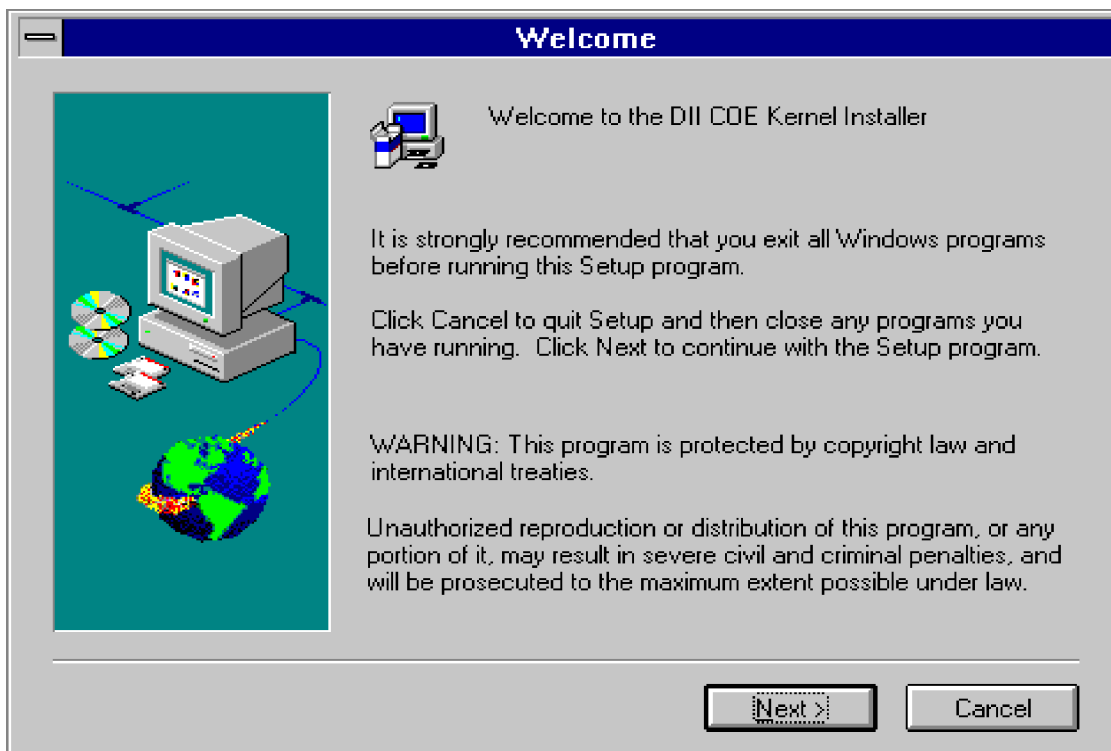


Figure 1. Welcome Window

- STEP 2:** **Select the destination drive.** The `Select the DII Drive` window appears as shown in Figure 2. Select the appropriate destination drive for the DII COE (i.e., Drive C, Drive D, or Drive E) and then click on the `Next` button. A status bar shows the progress of the installation.

NOTE: The destination drive must be an NTFS-formatted disk.

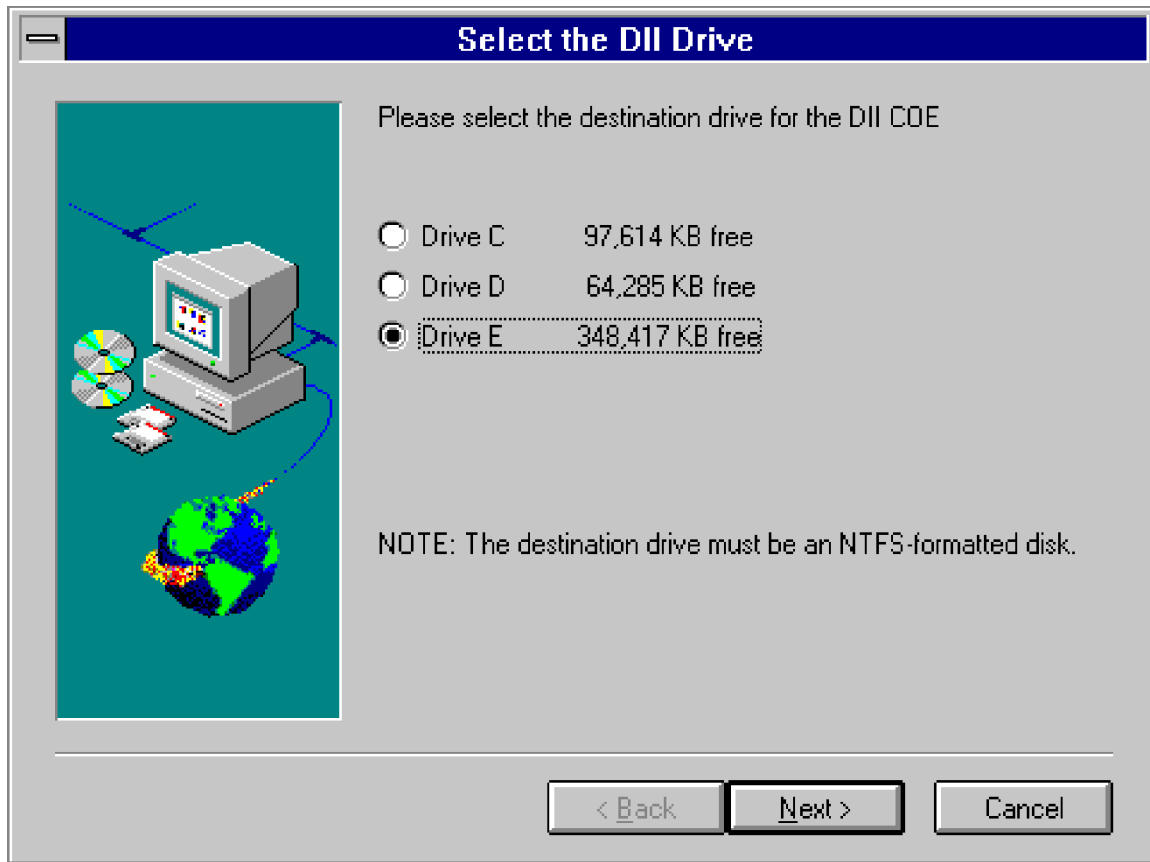


Figure 2. Select the DII Drive Window

- STEP 3: **Exit the installation program.** The DII COE Kernel Installer window appears. This window indicates that the DII COE kernel has been installed. Click on the **Finish** button to exit the program.
- STEP 4: **Reboot the workstation after the DII COE kernel has been installed.** Select the **File** pull-down menu from the Program Manager. Select the **Shutdown** option to open the **Shutdown Computer** window. Select the **Shutdown and Restart** option and click on the **OK** button. The computer will shutdown and restart.

Part 2. Installation Guide for Windows NT Service Pack (Windows NT 3.51, Service Pack 3)

NOTE: Courier font is used to indicate entries to be typed at the keyboard, Windows NT commands, file and directory names, and screen text. For example:

Run `InstallSP.exe` from the File Manager.

1. Overview

The Defense Information Infrastructure (DII) Common Operating Environment (COE) kernel is designed to run on the Windows NT Operating System Version 3.51, Service Pack 3 or later. Service packs are released intermittently to correct problems with the Windows NT Operating System. Each service pack contains corrections from all previous service packs.

Service Pack 3 is a collection of patches to Windows NT Version 3.51 that has been repackaged to simplify its installation. This service pack fixes many serious problems in the Windows NT Operating System and must be installed before the DII COE kernel is installed.

2. Installing Service Pack 3

Follow the steps below to install Service Pack 3.

- STEP 1: **Insert the first diskette.** Insert diskette 1 of the Service Pack 3 diskette set into the floppy drive.
- STEP 2: **Run the Service Pack executable from the diskette.** Run `InstallSP.exe` from the File Manager. This installation program launches a DOS command window.
- STEP 3: **Insert the remaining diskettes.** The installation program provides prompts for the remaining diskettes. After it has read each diskette, the program launches the Service Pack 3 installation program. Upon completion of the Service Pack installation, your machine reboots automatically.

3. Error Recovery Procedures

Installation of Service Pack 3 can fail on certain machines. If installation fails, it causes corrupt files to be placed on the system. Follow the steps below to correct this problem if this occurs.

- STEP 1: **Launch an MS-DOS command prompt from Windows NT.** The icon for the MS-DOS command prompt should appear in the `Main` program group in the Program Manager.

STEP 2: Locate the temporary directory on your machine. This directory can be specified by one of two environment variables: `tmp` or `temp`. To find the values of these variables, type `set` from the MS-DOS command prompt window to display the values of all the environment variables. Under the `tmp` or `temp` directory, you should find a directory called `DIIPatchTemp`.

STEP 3: Repair the corrupt files. Type the following command from the command prompt to repair the corrupt files:

```
chkdsk [disk name of the temp directory] /f
```

If you attempt to run `chkdsk` on a volume that is in use, the following message appears:

```
Chkdsk cannot run because the volume is in use by another  
process. Would you like to schedule this volume to be  
checked the next time the system restarts? (Y/N)
```

If this message appears, type `Y` and press `[RETURN]`. Then shut down all applications and reboot the system to complete the `chkdsk` operation.

STEP 4: Download Service Pack 3. Service Pack 3 can be downloaded from the Microsoft website located at <http://www.microsoft.com/>.

Part 3. Installation Procedures - Quick Guide, Microsoft Office 4.2c Application

1. Introduction

The following is a quick reference for installing the “Microsoft Office 4.2c” application for the DII on Windows NT. For more detailed information regarding the installation and operation of the “Microsoft Office 4.2c” application, please refer either to the on-line help documentation at the time of installation or to the most recent version of the “DII System Administrators Manual.”

2. Installation Procedures - Microsoft Office 4.2c Application

The “Microsoft Office 4.2c” application should be installed on any machine where you want to use a COTS presentation application windows manager. The acronym for the MS-Office 4.2 tool is “MOM” which stands for Microsoft Office Manager.

The “Microsoft Office 4.2c” MOM was installed from the Microsoft Office 4.2 suite of office automation tools purchased by DISA for JIEO. All of the supporting executables, libraries, initialization files, etc. will be installed in their respective locations after the installation process is complete.

Please check the “System Administration” group for the Microsoft Office 4.2c application icon. The description label for the Microsoft Word icon will be “Microsoft Office 4.2c.”

Please “double-click” the “Microsoft Office 4.2c” icon to launch the “Microsoft Office 4.2c” MOM application. There is a comprehensive library of detailed hypertext help that comes with this application.

After the installation is complete, you will notice the MS-Office Office Manager icon appears in the System Administration group. The icon symbolizes a pencil with a spreadsheet, paper, etc.

The Microsoft Office Manager 4.2c (MOM) will present itself as a floating toolbar in the upper right-hand corner of the console. The default button size will be large for easier viewing, but the toolbar is easily configurable.

In order to customize the toolbar, put the mouse pointer on the toolbar and click the right mouse button. At this point, you will see a menu bar with the “Customize” option. Make sure that the “Toolbar” folder is selected. After clicking on the “Customize” option, you will a “Customize” dialog box with scrollable list box containing check boxes. Please check off the box corresponding to the Microsoft application you would like to launch from the MOM toolbar. You may also click the “View” folder option, to configure such features as “Always Visible,” “Show Tooltips,” and “Show Title Screen” at startup. You may choose any combination of the three by selecting the appropriate check box.

Note that you can also edit the parameters and the working directory pertaining to the selected application by clicking on the “Edit” button. The “Move” up and down arrow buttons scrolls you through all of the application selections in the list box. The “Add” button allows you to add an application to the toolbar by typing in the required information similar to the way you add an icon to the Program Manager group, for instance.

If you need more detailed and comprehensive help, please choose the “Help” button, you will get hypertext help on how to do any customization of the MOM toolbar related to the size of its buttons, “always visible,” buttons displayed, etc.

Part 4. Installation Procedures - Quick Guide for Internet Relay Chat Client Application

Introduction

The following is a quick reference for installing the “Internet Relay Chat Client” application for the DII on Windows NT. For more detailed information regarding the installation and operation of the “Internet Relay Chat Client” application, please refer either to the on-line help documentation at the time of installation or to the most recent version of the “DII System Administrators Manual.”

Installation Procedures - Internet Relay Chat Client App.

The “Internet Relay Chat Client” application should be installed on any machine that you want to use as an IRC client. This IRC client will then connect to remote or local IRC server(s). Of course, in order for a machine to be used as an IRC server, you must first install the segment for **IRCS** and run the IRC server daemon process.

It is important to remember that an **IRCS** (Internet Relay Chat Server) should be accessible via a valid IP address whether it is a local or remote host. This IRCC (Internet Relay Chat Client) must be specified and known on the IRC Server side via a valid IP address too.

If you successfully login to the IRC Server, you will see an “Information” window displayed. You will be greeted by a message like “Welcome to the Internet Relay Network <nckname>.” The full name of the IRC server host machine will be displayed along with the number of users, channel and clients that are connected to the network.

The lower left of the main window shows the IRC server you are connected to, and in the middle is displayed your current channel. In order to say something, for instance, on a given channel, you click on the button located at the lower left until the “Say” label is shown, and type in your message in the entry provided. After you’ve typed your message and pressed <Enter>, you will notice that your message will be echoed in the middle of the main window. This message will be broadcast to all clients connected to your current channel.

NOTE: When you launch Winsock IRC v.3.1 for the first time, you will notice a “Connect IRC Server” dialog pop-up. You need to replace the “_domainname_” string with your own valid domain name. Use the default port number (6667) and replace the “_channelname_” string with a default channel name you’d like to use on startup everytime. For instance, if you use channel name “#tester1” as a test chat channel for initial testing of the application, then replace “_channelname_” with “tester1.” Remember, all channel names must be prefixed with a “#” symbol first.

ANY of the above information can also be changed in the “Setting - Preferences” menu selects in the “Personal” tab section.

PLEASE select the “Setting” main menu selection to enter the pertinent information before using the IRCC application. Select the “Preferences” sub-menu and then click on the “Personal” tab. The field entries are explained below:

(Note: You should replace everything within and including the “_” (underscore) symbols with your own valid information.

- 1) **Your Name** - Please replace “_realname_” with a “real” name.
- 2) **NickName** - 1st choice of nickname. This will be seen in the “Information” window that appears when you connect to an IRC server. Replace “_nckname_” with any alias name you desire.
- 3) **NickName 2** - Alternate choice of nickname, optional.
- 4) **E-Mail Address** - Please type in a valid e-mail address (e.g., “uid@mailhost.smil.mil”)
- 5) **Default Server** - The default server name should start with “irc” and then named to whatever name your IRC Server is installed on. That is, if your server, “irc.basecom.disa.mil” has the IRCS (Internet Relay Chat server) installed on it then “irc.basecom.disa.mil” is what you will enter here. Replace “_domainname_” with your own server domain name.
- 6) **Default Channel** - Enter the default channel name you would like to connect on the “Default Server” you have entered above. The format for a channel name always starts with a “#” character and can be any alpha-numeric string. (e.g., “#testchannel1” is a valid channel name) Replace “_channelname_” with your default channel name.

Note, that the location of “Internet Relay Chat Client” should be “\DII\Segments\IRCC.” This installation directory is the “root” directory for the “Internet Relay Chat Client” for Windows NT 3.51.

Please check to ensure that you entered “\DII\Segments\IRCC” as the installation directory when prompted from the “Internet Relay Chat Client” SETUP program. (i.e., do NOT go with the default directory “\WIRC”)

The assumption is that only ONE installation of the “Internet Relay Chat Client” exists per Windows NT machine.

Also, if you need any further help with installation, the application has excellent on-line help. Select the “Help” menu selection and choose the “Contents” menu selection.

The “Internet Relay Chat Client” is freeware downloaded from “www.tucows.com”. The real name of this IRCC is “Winsock IRC Version 3.1” released on March 24, 1996, by Alex Fung. Permission was granted by Mr. Fung for distribution of this software.

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